AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original). A method of differentiating a mammalian bone marrow cell into an endocrine hormone-producing cell, the method comprising the steps of:

(A) providing the bone marrow cell;

(B) first culturing the bone marrow cell in a low-glucose medium comprising DMSO; and

(C) then culturing the bone marrow cell in a high-glucose medium comprising serum under appropriate conditions and for a sufficient amount of time to promote differentiation of the cell into an endocrine hormone-producing cell.

2. (Original). The method of claim 1, wherein the bone marrow cell is a rodent cell.

3. (Original) The method of claim 2, wherein the rodent cell is a rat cell.

4. (Original). The method of claim 1, wherein the endocrine hormone-producing cell produces insulin.

5. (Original). The method of claim 1, wherein the endocrine hormone-producing cell produces glucagon.

6. (Original). The method of claim 1, wherein the endocrine hormone-producing cell produces somatostatin.

7. (Original). The method of claim 1, wherein the endocrine hormone-producing cell produces pancreatic polypeptide.

8. (Original). The method of claim 1, wherein the low-glucose medium contains glucose at a concentration of about 5.5 mM.

9. (Previously presented). The method of claim 1, wherein the high-glucose medium contains glucose at a concentration of about 25 mM.

10. (Previously presented). The method of claim 1, wherein the high-glucose medium comprises DMEM and feral bovine serum.

11. (Previously presented). The method of claim 10, wherein the bone marrow cell is cultured in the high-glucose medium for approximately seven days.

12. (Withdrawn). An endocrine hormone-producing cell made according to the method of claim 1.

13. (Withdrawn). A method comprising the steps of:

(A) providing a subject having a damaged pancreas; and

(B) administering to the subject at least one bone marrow cell.

14. (Withdrawn). The method of claim 13, wherein the damaged pancreas has fewer islet cells than a non-damaged pancreas.

15. (Withdrawn). The method of claim 13, wherein the subject is a mammal.

16. (Withdrawn). The method of claim 15, wherein the mammal is a rodent.

17. (Withdrawn). The method of claim 13, wherein the subject has hyperglycemia caused by diabetes.

18. (Withdrawn). The method of claim 17, wherein administering to the subject at least

one bone marrow cell reduces the hyperglycemia in the subject.

19. (Withdrawn). The method of claim 17, wherein administering to the subject at least one bone marrow cell increases insulin levels in the subject.

20. (Withdrawn). A method for reversing hyperglycemia in a mammal having diabetes, the method comprising the steps of:

(A) providing a mammal having hyperglycemia incident to diabetes;

(B) administering to the mammal a dose of endocrine hormone-producing cells sufficient to reduce the hyperglycemia in the mammal, the hormone-producing cells being made according to a method comprising the steps of:

first culturing bone marrow cells in a low-glucose medium comprising DMSO; and

then culturing the bone marrow cells in a high-glucose medium comprising serum under appropriate conditions and for a sufficient amount of time to promote differentiation of the cells into endocrine hormone-producing cells.

21. (Withdrawn). The method of claim 20, wherein the bone marrow cells are derived from a mammal.

22. (Withdrawn). The method of claim 21, wherein the mammal is a rat.

23. (Withdrawn). The method of claim 21, wherein the mammal is a human being.

24. (Withdrawn). The method of claim 20, wherein the endocrine hormone-producing cells produce insulin.

25. (Withdrawn). The method of claim 20, wherein the endocrine hormone-producing cells produce glucagon.

26. (Withdrawn). The method of claim 20, wherein the endocrine hormone-producing cells produce somatostatin.

27. (Withdrawn). The method of claim 20, wherein the endocrine hormone-producing cells produce pancreatic polypeptide.